PEPTIDES

VOLUME 7 NUMBER 1 JANUARY/FEBRUARY 1986

CONTENTS

$ACTH_{1-4}$ potentiates α-MSH-induced melanophore dispersion and excessive grooming.
DE GRAAN, P. N. E., B. M. SPRUIJT, A. N. EBERLE, J. GIRARD and W. H. GISPEN 1

Distribution of galanin immunoreactivity in the genitourinary tract of man and rat.
BAUER, F. E., N. D. CHRISTOFIDES, G. W. HACKER, M. A. BLANK, J. M. POLAK and S. R. BLOOM 5

The effect of β-(Tyr⁹)melanotropin-(9–18) on active avoidance behavior, electroconvulsive shock-induced amnesia and T-discrimination learning of rats.
TELEGDY, G., L. VÉCSEI, I. BOLLÓK and A. V. SCHALLY 11

Neurotensin-like immunoreactivities in human plasma: Feeding responses and metabolism.
HOLST PEDERSEN, J. and J. FAHRENKRUG 15

Effects of Pro-Leu-Gly-NH_2 and cyclo (Leu-Gly) on the binding of ^{3}H-quinuclidinyl benzilate to striatal cholinergic muscarinic receptors.
DAS, S., G. A. MATWYSHYN and H. N. BHARGAVA 21

The vasoconstrictor effect of neuropeptide Y and related peptides in the guinea pig isolated heart.
RIOUX, F., H. BACHELARD, J.-C. MARTEL and S. ST-PIERRE 27

Alpha-human atrial natriuretic polypeptide (Alpha-hANP) in normal volunteers and patients with heart failure or hypertension.
TANG, J., D. L. SONG, M. Z. SUEN, C. W. XIE, D. CHANG and J. K. CHANG 33

Antinociceptive effects in rodents of the dipeptide Lys-Trp (Nps) and related compounds.
GARCIA-LOPEZ, M. T., R. HERRANZ, R. GONZALEZ-MUÑIZ, J. R. NARANJO, M. L. DE CEBALLOS and J. DEL RIO 39

Distribution of epidermal growth factor binding sites in the adult rat anterior pituitary gland.
CHABOT, J.-G., P. WALKER and G. PELLETIER 45

Galanin: Evidence for a hypothalamic site of action to release growth hormone.
OTTLECZ, A., W. K. SAMSON and S. M. McCANN 51

Neuropeptide Y receptors in rat brain: Autoradiographic localization.
MARTEL, J.-C., S. ST-PIERRE and R. QUIRION 55

Brain insulin binding is decreased in Wistar Kyoto rats carrying the 'fa' gene.
FIGLEWICZ, D. P., H. IKEDA, T. R. HUNT, L. J. STEIN, D. M. DORSA, S. C. WOODS and D. PORTE, JR. 61

Identification and immunocytochemical localization of proctolin in pericardial organs of the shore crab, *Carcinus maenas*.
STANGIER, J., H. DIRCKSEN and R. KELLER 67

Effects of corticotropin-releasing factor, corticotropin and cortisol on gastrointestinal motility in dogs.
BUENO, L. and J. FIORAMONTI 73

Contents continued

Localization of urotensin I- and corticotropin-releasing factor-like immunoreactivity in the central nervous system of *Catostomus commersoni*.
YULIS, C. R., K. LEDERIS, K.-L. WONG and A. W. F. FISHER 79

Opioid and other peptides as inhibitors of leumorphin (dynorphin B-29) converting activity.
DEVI, L. and A. GOLDSTEIN 87

Role of antidiuretic activity in the inhibition of renin secretion by vasopressin in anesthetized dogs.
SCHWARTZ, J., C. OTT, O. MORALES and I. A. REID 91

Somatostatin and CCK-8 modulate release of striatal amino acids: Role of dopamine receptors.
ARNERIĆ, S. P., M. P. MEELEY and D. J. REIS 97

Preventive effect of cholecystokinin octapeptide on experimental amnesia in rats.
KATSUURA, G. and S. ITOH 105

Elimination of vasopressin analgesia following lesions placed in the rat hypothalamic paraventricular nucleus.
BODNAR, R. J., L. S. TRUESDELL, J. HALDAR, I. A. ARAL, J. H. KORDOWER and G. NILAVER 111

Characterization of endorphins from the pituitary of the Spiny Dogfish *Squalus acanthias*.
LORENZ, R. G., A. N. TYLER, K. F. FAULL, G. MAKK, J. D. BARCHAS and C. J. EVANS 119

Effect of vasoactive intestinal peptide, peptide histidine isoleucine and growth hormone-releasing factor-40 on bombesin-like immunoreactivity, somatostatin and gastrin release from the perfused rat stomach.
SCHUSDZIARRA, V., R. SCHMID, H. BENDER, M. SCHUSDZIARRA, J. RIVIER, W. VALE and M. CLASSEN 127

Proglumide fails to increase food intake after an ingested preload.
SCHNEIDER, L. H., J. GIBBS and G. P. SMITH 135

Immunoreactive α-human atrial natriuretic polypeptide in human plasma.
NARUSE, M., K. NARUSE, K. OBANA, F. KURIMOTO, H. SAKURAI, T. HONDA, T. HIGASHIDA, H. DEMURA, T. INAGAMI and K. SHIZUME 141

Anglerfish islets contain NPY immunoreactive nerves and produce the NPY analog aPY.
NOE, B. D., J. K. McDONALD, F. GREINER, J. G. WOOD and P. C. ANDREWS 147

Use of cryoprotectant to maintain longterm peptide immunoreactivity and tissue morphology.
WATSON, R. E., JR., S. J. WIEGAND, R. W. CLOUGH and G. E. HOFFMAN 155

PEPTIDES

VOLUME 7 NUMBER 2 MARCH/APRIL 1986

CONTENTS

Articles

Effect of tunicamycin on biosynthesis, processing and release of proopiomelanocortin-derived peptides in the intermediate lobe of the frog *Rana ridibunda*.
VAUDRY, H., B. JENKS, L. VERBURG-VAN KEMENADE and M.-C. TONON 163

The mast cell response to substance P: Effects of neuraminidase, limulin, and some novel synthetic peptide antagonists.
COLEMAN, J. W., Q. HUANG and D. R. STANWORTH 171

Interaction of vasoactive intestinal peptide (VIP) with rat lymphoid cells.
CALVO, J. R., P. MOLINERO, J. JIMENEZ, R. GOBERNA and J. M. GUERRERO 177

Effect of vasoactive intestinal peptide on serotonin metabolism in the suprachiasmatic area of the rat: Mechanism of action.
HERY, M., M.-C. BARRIT, M. FAUDON and F. HERY 183

Vasopressin and electrophysiological signs of attention in man.
BORN, J., G. FEHM-WOLFSDORF, W. LUTZENBERGER, K. H. VOIGT and H. L. FEHM 189

Opiate receptor binding affinities of some D-amino acid substituted β-casomorphin analogs.
LIEBMANN, C., M. SZÜCS, K. NEUBERT, B. HARTRODT, H. AROLD and A. BARTH 195

The effect of MSH/ACTH 4–10 on delayed response performance and post-test locomotor activity in rats.
MILLER, L. H. and B. A. TURNBULL 201

Central respiratory stimulation produced by thyrotropin-releasing hormone in the cat.
HOLTMAN, J. R., JR., A. L. BULLER, P. HAMOSH and R. A. GILLIS 207

Central injections of arginine vasopressin prolong extinction of active avoidance.
KOOB, G. F., R. DANTZER, R.-M. BLUTHÉ, C. LEBRUN, F. E. BLOOM and M. LE MOAL 213

Episodic secretion of ACTH in rats.
CARNES, M., M. S. BROWNFIELD, N. H. KALIN, S. LENT and C. M. BARKSDALE 219

Peptidases involved in the catabolism of neurotensin: Inhibitor studies using superfused rat hypothalamic slices.
McDERMOTT, J. R., M. A. VIRMANI, J. D. TURNER and A. M. KIDD 225

Human α- and β-CGRP and rat α-CGRP are coronary vasodilators in the rat.
HOLMAN, J. J., R. K. CRAIG and I. MARSHALL 231

Corticosteroidogenesis modulation by β-endorphin and dynorphin$_{1-17}$ in isolated rat adrenocortical cells.
GUAZA, C., M. ZUBIAUR and J. BORRELL 237

Contents continued

Disappearance of atrial natriuretic factor from circulation in the rat.
MURTHY, K. K., G. THIBAULT, E. L. SCHIFFRIN, R. GARCIA, L. CHARTIER, J. GUTKOWSKA, J. GENEST and M. CANTIN 241

Reversed-phase HPLC study on the *in vitro* enzymic degradation of dermorphin.
SCALIA, S., S. SALVADORI, M. MARASTONI, F. BORTOLOTTI and R. TOMATIS 247

GABA differentially regulates the gene expression of proopiomelanocortin in rat intermediate and anterior pituitary.
LOEFFLER, J. PH., B. A. DEMENEIX, C. W. PITTIUS, N. KLEY, K. D. HAEGELE and V. HÖLLT 253

The effects of barbiturates upon the hemodynamic responses to intravenous methionine-enkephalin in dogs: Modulation by the GABA complex.
SANDER, G. E., R. F. LOWE and T. D. GILES 259

Co-expression of vasopressin with β-endorphin and dynorphin in individual cells from the ovaries of Brattleboro and Long-Evans rats: Immunocytochemical studies.
LOLAIT, S. J., D. J. AUTELITANO, A. J. MARKWICK, B. H. TOH and J. W. FUNDER 267

Met-enkephalin-like immunoreactivity in neurointermediate pituitary is decreased by DA receptor stimulation.
GEORGE, S. R. and M. KERTESZ 277

Autoradiographic visualization of CNS receptors for vasoactive intestinal peptide.
SHAFFER, M. M. and T. W. MOODY 283

Bradykinin releases acetylcholine from myenteric plexus by a prostaglandin-mediated mechanism.
YAU, W. M., J. A. DORSETT and M. L. YOUTHER 289

Brain CCK receptors: Species differences in regional distribution and selectivity.
WILLIAMS, J. A., K. A. GRYSON and D. J. McCHESNEY 293

Immunohistochemical and chromatographic studies of peptides with tachykinin-like immunoreactivity in the central nervous system of the lamprey.
VAN DONGEN, P. A. M., E. THEODORSSON-NORHEIM, E. BRODIN, T. HÖKFELT, S. GRILLNER, A. PETERS, A. C. CUELLO, W.-G. FORSSMANN, M. REINECKE, E. A. SINGER and L. H. LAZARUS .. 297

Eel calcitonin binding site distribution and antinociceptive activity in rats.
GUIDOBONO, F., C. NETTI, V. SIBILIA, I. VILLA, A. ZAMBONI and A. PECILE 315

Neuropeptide Y depresses reflex urinary bladder contractions in rats and modifies central activity of opioid agonists.
DRAY, A., L. NUNAN and W. WIRE 323

Specific glucagon-related peptides isolated from anglerfish islets are metabolic cleavage products of (pre)proglucagon-II.
NOE, B. D. and P. C. ANDREWS 331

Cardiovascular effects produced by microinjection of calcitonin gene-related peptide into the rat central amygdaloid nucleus.
NGUYEN, K. Q., M. A. SILLS and D. M. JACOBOWITZ 337

Neuropeptide Y innervation of amygdaloid and hypothalamic neurons that project to the dorsal vagal complex in rat.
GRAY, T. S., T. L. O'DONOHUE and D. J. MAGNUSON 341

^{125}I-FK 33-824: A selective probe for radioautographic labeling of μ opioid receptors in the brain.
MOYSE, E., F. PASQUINI, R. QUIRION and A. BEAUDET 351

The effect of cyclic nucleotides on secretin secretion in canine duodenal mucosa in vitro.
MURTHY, S. N. S., A. LAVY, C. A. CASSEY, D. S. MORGANTINI, V. P. DINOSO, JR. and T.-M. CHANG 357

Brief Communications

Interference of eluates from octadecyl cartridges with an angiotensin II radioimmunoassay.
DESCHEPPER, C. F. and W. F. GANONG 365

Lack of inhibitory effect of aprotinin and bacitracin on the spinal release of Met-enkephalin induced by intraventricular beta-endorphin.
TSENG, L.-F., R. C. KING and J. M. FUJIMOTO 369

Effect of atrial natriuretic factor on central angiotensin II-induced responses in rats.
NAKAMARU, M., R. TAKAYANAGI and T. INAGAMI 373

PEPTIDES

VOLUME 7 NUMBER 3 MAY/JUNE 1986

CONTENTS

Articles

In vitro degradation of neurotensin in human plasma.
LEE, Y. C., L. O. UTTENTHAL, H. A. SMITH and S. R. BLOOM 383

α-Neo-endorphin coexists with dynorphin-A(1–8) within intramurally lying perikarya of rat duodenum.
WOLTER, H. J. 389

Influence of endogenous growth hormone-releasing factor (GRF) on the secretion of GH during the perinatal period in the rat.
GUILLAUME, V., F. BOUDOURESQUE, M. GRINO, A. DUTOUR, G. PEYRE, M. C. TONON, H. VAUDRY, C. ROUGEOT, B. CONTE-DEVOLX and C. OLIVER 393

A common precursor to two major crab neurosecretory peptides.
STUENKEL, E. L. 397

Identification of an endogenous protease that processes atrial natriuretic peptide at its amino terminus.
BAXTER, J. H., I. B. WILSON and R. B. HARRIS 407

Fetal adrenal VIP: Distribution and effect on medullary catecholamine secretion.
CHEUNG, C. Y. and M. A. HOLZWARTH 413

Antinociceptive and Met-enkephalin releasing effects of tachykinins and substance P fragments.
NARANJO, J. R., A. ARNEDO, M. C. DE FELIPE and J. DEL RIO 419

In vitro interaction of ACTH with rat brain muscarinic receptors.
TONNAER, J. A. D. M., M. VAN VUGT and J. S. DE GRAAF 425

The coronary vasodilator effect of neurotensin in the guinea pig isolated heart.
BACHELARD, H., S. ST-PIERRE and F. RIOUX 431

The effects of pro-opiomelanocortin peptides on cyclic AMP and tyrosinase in melanoma cells.
FARAH, J. M., JR., J. F. BISHOP, H. Q. NGUYEN and T. L. O'DONOHUE 437

The role of calcium in the mechanism of corticotropin releasing factor mediated ACTH release.
SOBEL, D. O. 443

Magnetic fields differentially inhibit mu, delta, kappa and sigma opiate-induced analgesia in mice.
KAVALIERS, M. and K.-P. OSSENKOPP 449

Neuropeptide Y immunoreactivity in human cerebrospinal fluid.
BERRETTINI, W. H., J. I. NURNBERGER, JR. and D. A. DIMAGGIO 455

Receptor-mediated uptake of GnRH agonist and antagonists by cultured gonadotropes: Evidence for differential intracellular routing.
JENNES, L., D. COY and P. M. CONN 459

Contents continued

Hemodynamic effects of corticotropin releasing hormone in the anesthetized cynomolgus monkey.
UDELSMAN, R., W. T. GALLUCCI, J. BACHER, D. L. LORIAUX and G. P. CHROUSOS 465

CCK-8 stimulation of ventromedial hypothalamic neurons *in vitro:* A feeding-relevant event?
KOW, L.-M. and D. W. PFAFF 473

High performance liquid chromatographic properties of peptides and proteins on a dihydroxyalkyl bonded silica stationary phase.
MEYERSON, L. R. and K. I. ABRAHAM 481

Derivatives of speract are associated with the eggs of *Lytechinus pictus* sea urchins.
SHIMOMURA, H., N. SUZUKI and D. L. GARBERS 491

Central nervous system effects of peptides, 1980–1985:
A cross-listing of peptides and their central actions from the first six years of the journal *Peptides*.
ZADINA, J. E., W. A. BANKS and A. J. KASTIN 497

Brief Communications

Opposite effects of intraventricular and intracisternal administration of vasopressin on blood pressure in rats.
GÜNTHER, O., G. L. KOVÁCS, G. SZABÓ and G. TELEGDY 539

Intraventricular administration of arginine vasopressin suppresses prolactin release via a dopaminergic mechanism.
DEPAOLO, L. V., P. V. BERARDO and A. J. CARRILLO 541

Erratum 545

PEPTIDES

VOLUME 7 NUMBER 4 JULY/AUGUST 1986

CONTENTS

Articles

Met-enkephalin-induced release into the blood of a factor causing postural asymmetry.
BAKALKIN, G. Ya., A. G. KOBYLYANSKY, L. V. NAGORNAYA, K. N. YARYGIN and M. I. TITOV 551

Behavioral alterations induced by substance P, bombesin, and related peptides in mice.
MEISENBERG, G. and W. H. SIMMONS 557

The ACTH-(4–9) analog ORG 2766 and desglycinamide^9-(Arg^8)-vasopressin reverse the retrograde amnesia induced by disrupting circadian rhythms in rats.
FEKETE, M., J. M. VAN REE and D. DE WIED 563

New evidence for neuronal function of vasopressin: Sympathoadrenal mediation of intrathecal vasopressin-induced hypertension.
TAN, D.-P. and K. TSOU 569

Localization and characterization of atrial natriuretic factor (ANF)-like peptide in the frog atrium.
NETCHITAILO, P., M. FEUILLOLEY, G. PELLETIER, M. CANTIN, A. DE LEAN, F. LEBOULENGER and H. VAUDRY 573

Short and long term inhibitory actions of alpha-melanocyte stimulating hormone on lordosis in rats.
RAIBLE, L. H. and B. B. GORZALKA 581

Cholecystokinin-induced suppression of locomotion is attenuated in capsaicin pretreated rats.
RITTER, R. C., P. KALIVAS and S. BERNIER 587

Existence of different forms of adrenocorticotropin in rat hypothalamus.
ARGIOLAS, A., M. R. MELIS, W. FRATTA and G. L. GESSA 591

Pressor, tachycardic and behavioral excitatory responses in conscious rats following ICV administration of ACTH and CRF are blocked by naloxone pretreatment.
SAUNDERS, W. S. and J. A. THORNHILL 597

The preferential release of beta-endorphin from the anterior pituitary lobe by Corticotropin Releasing Factor (CRF).
YOUNG, E. A., J. LEWIS and H. AKIL 603

Quantitative distribution of galanin-like immunoreactivity in the rat central nervous system.
SKOFITSCH, G. and D. M. JACOBOWITZ 609

Biosynthetic fate of the amino-terminal fragment of pro-opiomelanocortin within the intermediate lobe of the mouse pituitary.
BENNETT, H. P. J. 615

Neuropeptide Y is an inhibitor of neural function in the myenteric plexus of the guinea-pig ileum.
GARZÓN, J., V. HÖLLT and P. SÁNCHEZ-BLÁZQUEZ 623

Contents continued

Possible mechanisms of positive inotropic action of synthetic human calcitonin gene-related peptide in isolated rat atrium.
SATOH, M., R. OKU, A. MAEDA, N. FUJII, A. OTAKA, S. FUNAKOSHI, H. YAJIMA and H. TAKAGI 631

Neuropeptide processing activity in *Aplysia* bag cell homogenates.
BERRY, R. W. and M. E. YATES 637

Alteration of secretin-stimulated cardiac adenylate cyclase activity in rats with portacaval shunt.
DE FONTAINE, S., P. ROBBERECHT, P. DE NEFF and J. CHRISTOPHE .. 645

ACTH acts via an anterior ventral third ventricular site to elicit grooming behavior.
DUNN, A. J. and R. W. HURD 651

Characterization of sulfated forms of the pro-opiomelanocortin amino-terminal glycopeptide in rat intermediate lobe cells.
BOURBONNAIS, Y., E. LEMIEUX and P. CRINE 659

The endogenous tripeptide Tyr-Gly-Gly as a possible metabolite of opioid peptides in rat brain: Identification, regional distribution, effects of lesions and formation in depolarized slices.
GIROS, B., C. LLORENS-CORTES, C. GROS and J.-C. SCHWARTZ 669

Quantitative distribution of angiotensin II binding sites in rat brain by autoradiography.
SAAVEDRA, J. M., A. ISRAEL, L. M. PLUNKETT, M. KURIHARA, K. SHIGEMATSU and F. M. A. CORREA 679

Sequences of gastrins purified from a single antrum of dog and of goat.
BONATO, C., J. ENG, J. D. HULMES, M. MIEDEL, Y.-C. E. PAN and R. S. YALOW 689

Hypothalamic paraventricular nucleus stimulation-induced gastric acid secretion and bradycardia suppressed by oxytocin antagonist.
ROGERS, R. C. and G. E. HERMANN 695

Brief Communications

Enhanced binding of ^{3}H-arginine^{8}-vasopressin in the Brattleboro rat.
SHEWEY, L. M. and D. M. DORSA 701

Norepinephrine stimulates LH-RH secretion into the hypophysial portal blood of the rat.
CHING, M. and R. J. KRIEG, JR. 705

PEPTIDES

VOLUME 7 NUMBER 5 SEPTEMBER/OCTOBER 1986

CONTENTS

Stimulation of food intake following opioid microinjection into the nucleus accumbens septi in rats.
MAJEED, N. H., B. PRZEWŁOCKA, K. WĘDZONY and R. PRZEWŁOCKI .. 711

Cosecretion of peptide histidine methionine (PHM) and vasoactive intestinal peptide (VIP) in patients with VIP-producing tumors.
FAHRENKRUG, J. and J. H. PEDERSEN 717

Relative bioactivities of cholecystokinins-8 and -33 on rat pancreatic acini.
LIDDLE, R. A., J. ELASHOFF and J. R. REEVE, JR. 723

The effect of cholecystokinin, bombesin and calcitonin on food intake in virgin, lactating and postweaning female rats.
WAGER-SRDAR, S. A., J. E. MORLEY and A. S. LEVINE 729

Met^5-enkephalin-Arg^6-Gly^7-Leu^8 immunoreactivity in the human gut.
FERRI, G.-L., R. A. MORREALE and G. J. DOCKRAY 735

Interaction of somatostatin with isolated cytosol from rabbit renal papilla.
ARILLA, E., B. ROCA and J. C. PRIETO 741

Opioid peptide effects on feeding in rabbits.
GOSNELL, B. A. and J. M. LIPTON 745

Neurotoxin effects on oxytocin, vasopressin and somatostatin in discrete rat brain areas.
JOHNSTON, C. A. and A. NEGRO-VILAR 749

Opioid receptor binding profile of selected dermorphin-like peptides.
ROSSI, A. C., R. DE CASTIGLIONE and G. PERSEO 755

Density distribution of guinea pig myenteric plexus nerve endings containing immunoreactive substance P.
BUCSICS, A., P. HOLZER, I. TH. LIPPE, M. A. PABST and F. LEMBECK 761

Physiological chemoreceptor stimulation decreases enkephalin and substance P in the carotid body.
HANSON, G., L. JONES and S. FIDONE 767

Effect of CCK-8 on basal and meal-stimulated somatostatin in the baboon.
FIGLEWICZ, D. P., S. C. WOODS, D. PORTE, JR. and G. J. TABORSKY, JR. 771

Neurotransmitters and estrogen interact to affect beta-endorphin levels in castrated female rats.
FORMAN, L. J. and S. ESTILOW 775

Differential sensitivity of hypothalamic and medullary opiocortin and tyrosine hydroxylase neurons to the neurotoxic effects of monosodium glutamate (MSG).
PILCHER, W. H. and S. A. JOSEPH 783

Characterization of vasoactive intestinal peptide (VIP) receptors in mammalian lung.
DICKINSON, K. E. J., M. SCHACHTER, C. M. M. MILES, D. H. COY and P. S. SEVER 791

Contents continued

ACTH-immunoreactive neurons and their projections in the cat forebrain.
KITAHAMA, K., M. SALLANON, C. BUDA, M. JANIN, M. P. DUBOIS and M. JOUVET 801

Passive avoidance deficit following intracerebroventricular administration of cholecystokinin tetrapeptide amide in rats.
KATSUURA, G. and S. ITOH 809

Neuromedin B-like peptides in rat brain: Biochemical characterization, mechanism of release and localization in synaptosomes.
MOODY, T. W., L. Y. KORMAN and T. L. O'DONOHUE 815

Neuropeptide Y (NPY) and the pig heart: Release and coronary vasoconstrictor effects.
RUDEHILL, A., A. SOLLEVI, A. FRANCO-CERECEDA and J. M. LUNDBERG 821

Identification of His^5,Trp^7,Tyr^8-GnRH (chicken GnRH II) in amphibian brain.
KING, J. A. and R. P. MILLAR 827

Peptide transmitters of primary sensory neurons: Similar actions of tachykinins and bombesin-like peptides.
BISHOP, J. F., T. W. MOODY and T. L. O'DONOHUE 835

ACTH-(1–24) and α-MSH antagonize feeding behavior stimulated by kappa opiate agonists.
POGGIOLI, R., A. V. VERGONI and A. BERTOLINI 843

A fragment of vasoactive intestinal peptide, VIP(10–28), is an antagonist of VIP in the colon carcinoma cell line, HT29.
TURNER, J. T., S. B. JONES and D. B. BYLUND 849

Pharmacological characterization and autoradiographic localization of substance P receptors in guinea pig brain.
DAM, T.-V. and R. QUIRION 855

Secretin receptors in the rat kidney: Adenylate cyclase activation and renal effects.
CHARLTON, C. G., R. QUIRION, G. E. HANDELMANN, R. L. MILLER, R. T. JENSEN, M. S. FINKEL and T. L. O'DONOHUE 865

Binding sites of atrial natriuretic peptide in tree shrew adrenal gland.
FUCHS, E., K. SHIGEMATSU and J. M. SAAVEDRA 873

Immunocytochemical localization of somatostatin in human brain.
BENNETT-CLARKE, C. A. and S. A. JOSEPH 877

Naturally occurring opioid peptides modulate H^+-production by isolated rat parietal cells.
SCHEPP, W., J. SCHNEIDER, V. SCHUSDZIARRA and M. CLASSEN 885

Co-existence of CRF and vasopressin immunoreactivity in parvocellular paraventricular neurons of rat hypothalamus.
PIEKUT, D. T. and S. A. JOSEPH 891

Localization of choline acetyltransferase and vasoactive intestinal polypeptide-like immunoreactivity in the nervus terminalis of the fetal and neonatal rat.
SCHWANZEL-FUKUDA, M., J. I. MORRELL and D. W. PFAFF 899

VOLUME INDEX

Review

Endogenous opiates: 1985.
OLSON, G. A., R. D. OLSON and A. J. KASTIN 907

Brief Communication

Protein kinase C potentiates corticotropin releasing factor stimulated cyclic AMP in pituitary.
CRONIN, M. J., J. R. ZYSK and A. J. BAERTSCHI 935

PEPTIDES

VOLUME 7 NUMBER 6 NOVEMBER/DECEMBER 1986

CONTENTS

Articles

Localization of melanin-concentrating hormone-like immunoreactivity in the brain and pituitary of the frog *Rana ridibunda*.
ANDERSEN, A. C., G. PELLETIER, A. N. EBERLE, P. LEROUX, S. JEGOU and H. VAUDRY 941

Characterization of pancreatic somatostatin binding sites with a ^{125}I-somatostatin 28 analog.
ZEGGARI, M., N. VIGUERIE, Ch. SUSINI, J. P. ESTEVE, N. VAYSSE, J. RIVIER, E. WUNSCH and A. RIBET 953

Synthetic peptides from C-reactive protein containing tuftsin-related sequences.
BUCHTA, R., M. FRIDKIN, M. PONTET and D. ROMEO 961

The effect of peripheral administration of peptides on food intake, glucose and insulin in wolf pups.
MORLEY, J. E., A. S. LEVINE, H. HERTEL, T. TANDESKI and U. S. SEAL 969

Carotid ligation alters cholecystokinin-8 (CCK-8) immunoreactivity in gerbil brains.
XU, C., C. L. YANG, X. L. DU, Q. WEI and C. LI 973

Endogenous opioids and opiate antagonists modulate the blood pressure of the spontaneously hypertensive rat.
LEVIN, E. R., S. MILLS and M. A. WEBER 977

Comparison of responses by striatonigral substance P and neurokinin A systems to methamphetamine treatment.
HANSON, G. R., A. A. LETTER, K. MERCHANT and J. W. GIBB 983

Effect of atrial natriuretic factor on plasma vasopressin in conscious rats.
JANUSZEWICZ, P., P. LAROSE, H. ONG, J. GUTKOWSKA, J. GENEST and M. CANTIN 989

Analgesic properties of a systemically-administered synthetic dipeptide of 5-hydroxytryptophan.
BODNAR, R. J., S. E. KARPIAK, P. E. MANN, H. TAMIR, M. WILCHEK and B. C. YOBURN 995

DSIP affects adrenergic stimulation of rat pineal N-acetyltransferase *in vivo* and *in vitro*.
GRAF, M. V. and G. A. SCHOENENBERGER 1001

Inhibitory influences of MIF-1 (PLG) and Tyr-MIF-1 (YPLG) on aggression and defeat-induced analgesia in mice.
KAVALIERS, M. and M. HIRST 1007

Effect of hypophysectomy and growth hormone replacement on hypothalamic GHRH.
GANZETTI, I., V. DE GENNARO, M. REDAELLI, E. E. MÜLLER and D. COCCHI 1011

Biologically active analogs of thymopentin with enhanced enzymatic stability.
HEAVNER, G. A., D. J. KROON, T. AUDHYA and G. GOLDSTEIN 1015

Contents continued

Quantitative autoradiography of angiotensin II receptors in the SHR brain.
GEHLERT, D. R., R. C. SPETH and J. K. WAMSLEY 1021

Autoradiographic distribution of ^{125}I-galanin binding sites in the rat central nervous system.
SKOFITSCH, G., M. A. SILLS and D. M. JACOBOWITZ 1029

Distribution of neuropeptide K-immunoreactivity in the rat central nervous system.
VALENTINO, K. L., K. TATEMOTO, J. HUNTER and J. D. BARCHAS 1043

Copper deficiency in rats increases pancreatic enkephalin-containing peptides and insulin.
RECANT, L., N. R. VOYLES, K. I. TIMMERS, C. ZALENSKI, M. FIELDS and S. J. BHATHENA 1061

Catabolism of neurotensin by neural (neuroblastoma clone N1E115) and extraneural (HT29) cell lines.
CHECLER, F., S. AMAR, P. KITABGI and J.-P. VINCENT 1071

Photoperiod-peptide interactions in the energy intake of Siberian hamsters.
BARTNESS, T. J., J. E. MORLEY and A. S. LEVINE 1079

The cardiovascular response to epicardial application of neurotensin in guinea pigs.
RIOUX, F., H. BACHELARD, J. BARABÉ and S. ST-PIERRE 1087

Influence of centrally administered peptides on ear withdrawal from heat in the rabbit.
WILLIAMS, D. W., JR., J. M. LIPTON and A. H. GIESECKE, JR. 1095

Identification of diverse molecular forms of GnRH in reptile brain.
POWELL, R. C., G. CIARCIA, V. LANCE, R. P. MILLAR and J. A. KING 1101

Pharmacologic characterization and autoradiographic distribution of binding sites for iodinated tachykinins in the rat central nervous system.
BUCK, S. H., C. J. HELKE, E. BURCHER, C. W. SHULTS and T. L. O'DONOHUE 1109

Interaction of bradykinin with sodium dodecyl sulfate and certain acidic lipids.
CANN, J. R., A. VATTER, R. J. VAVREK and J. M. STEWART 1121

Correlation of structural changes in parathyroid hormone with its vascular action.
HONG, B.-S., M. C. M. YANG, J. N. LIANG and P. K. T. PANG 1131

Possible recognition of the GnRH receptor by an antiserum against a peptide encoded by nucleotide sequence complementary to mRNA of a GnRH precursor peptide.
GÖRCS, T. J., P. E. GOTTSCHALL, D. H. COY and A. ARIMURA 1137

Expression of atrial natriuretic factor gene in heart ventricular tissue.
NEMER, M., J.-P. LAVIGNE, J. DROUIN, G. THIBAULT, M. GANNON and T. ANTAKLY 1147

Comparison of the effects of CRF and stress on levels of pituitary cyclic AMP and plasma ACTH *in vivo*.
KANT, G. J., M. A. OLESHANSKY, D. D. WALCZAK, E. H. MOUGEY and J. L. MEYERHOFF 1153

Protective effect of CR 1409 (cholecystokinin antagonist) on experimental pancreatitis in rats and mice.
MAKOVEC, F., M. BANI, R. CEREDA, R. CHISTÈ, L. REVEL, L. C. ROVATI, I. SETNIKAR and L. A. ROVATI 1159

Review

Delta-sleep-inducing peptide (DSIP): An update.
GRAF, M. V. and A. J. KASTIN 1165

Brief Communications

Neuropeptide Y chronically injected into the hypothalamus: A powerful neurochemical inducer of hyperphagia and obesity.
STANLEY, B. G., S. E. KYRKOULI, S. LAMPERT and S. F. LEIBOWITZ .. 1189

Motilin and human pancreatic polypeptide measured in CSF from alcoholic and non-alcoholic neurological patients.
TRACK, N. S. and P. L. CARLEN 1193

Endorphinic neurons are contacting the tuberoinfundibular dopaminergic neurons in the rat brain.
MOREL, G. and G. PELLETIER 1197

Index to Volume 7 1201

PEPTIDES

VIP and Related Substances
Second International Symposium

Supplement to *Peptides An International Journal*

CONTENTS

Introduction ix

Acknowledgements ix

Chemistry and Molecular Biology

Structure and expression of the vasoactive intestinal peptide (VIP) gene in a human tumor.
GOZES, I., M. BODNER, Y. SHANI and M. FRIDKIN 1

Identification of two pro-VIP forms in a human neuroblastoma cell line.
SVOBODO, M., A. GREGOIRE, C. YANAIHARA, N. YANAIHARA and J. CHRISTOPHE 7

Purification and amino acid sequences of dog, goat and guinea pig VIPs.
ENG, J., B.-H. DU, J.-P. RAUFMAN and R. S. YALOW 17

Purification and characterisation of VIP from two species of dogfish.
DIMALINE R. and M. C. THORNDYKE 21

The glucagon superfamily: Precursor structure and gene organization.
BELL, G. I. 27

The biological significance of "Enteroglucagon." Present status.
BATAILLE, D., C. JARROUSSE, A. KERVRAN, C. DEPIGNY and M. DUBRASQUET 37

Conformation, Structure-Activity Relationships

Conformation of peptides of the secretin-VIP-glucagon family in solution.
BODANSZKY, M. and A. BODANSZKY 43

Strategies in the design of synthetic agonists and antagonists of growth hormone releasing factor.
COY, D. H., W. A. MURPHY, V. A. LANCE and M. L. HEIMAN 49

Comparative structural requirements of thirty GRF analogs for interaction with GRF- and VIP receptors and coupling to adenylate cyclase in rat adenopituitary, liver and pancreas.
ROBBERECHT, P., M. WAELBROECK, D. COY, P. DE NEEF, J.-C. CAMUS and J. CHRISTOPHE 53

New analogues of secretin.
KÖNIG, W., M. BICKEL, H. WISSMANN and J. SANDOW 61

Superactive amidated COOH-terminal glucagon analogues with no methionine or tryptophan.
MURPHY, W. A., D. H. COY and V. A. LANCE 69

Structural requirements for gastric inhibitory polypeptide (GIP) receptor binding and stimulation of insulin release.
MALETTI, M., M. CARLQUIST, B. PORTHA, M. KERGOAT, V. MUTT and G. ROSSELIN 75

Interaction of synthetic N- and C-terminal fragments of helodermin with rat liver VIP receptors.
ROBBERECHT, P., N. YANAIHARA, C. YANAIHARA, P. DE NEEF, J.-C. CAMUS, A. VANDERMEERS, M.-C. VANDERMEERS-PIRET and J. CHRISTOPHE 79

PHI structural requirements for potentiation of glucose-induced insulin release.
YANAIHARA, C., Y. HASHIMOTO, Y. TAKEDA, I. KATO, N. S. TRACK, K. NOKIHARA, H. MANAKA, T. IWANAGA, T. FUJITA, H. OKAMOTO and N. YANAIHARA 83

Receptors

The receptors of the VIP family peptides (VIP, secretin, GRF, PHI, PHM, GIP, glucagon and oxyntomodulin). Specificities and identity.
ROSSELIN, G. 89

Effector mechanisms of peptides of the VIP family.
CHRISTOPHE, J., M. SVOBODA, M. LAMBERT, M. WAELBROECK, J. WINAND, J.-P. DEHAYE, M.-C. VANDERMEERS-PIRET, A. VANDERMEERS and P. ROBBERECHT 101

Comparative efficacy of seven synthetic glucagon analogs, modified in position 1, 2 and/or 12, on liver and heart adenylate cyclase from rat.
ROBBERECHT, P., M. WAELBROECK, J.-C. CAMUS, P. DE NEEF, D. H. COY and J. CHRISTOPHE 109

VIP receptor activity during HT29-18 cell differentiation and rat intestinal development.
CHASTRE, E., S. EMAMI and C. GESPACH 113

Functional receptors for VIP, GIP, Glucagon-29 and -37 in the HGT-1 human gastric cancer cell line.
EMAMI, S., E. CHASTRE, H. BODÉRÉ, C. GESPACH, D. BATAILLE and G. ROSSELIN 121

Cycle of VIP in the human transformed colonic epithelial cells (HT-29) in culture.
MARIE, J. C., D. HUI BON HOA, G. HEJBLUM and G. ROSSELIN 129

Characterization of the vasoactive intestinal peptide (VIP) binding sites: A biochemical and an immunological approach.
MARVALDI, J., J. LUIS, J.-M. MULLER, A. EL BATTARI, J. FANTINI, J.-M. MARTIN, B. ABADIE, A. TIRARD and J. PICHON 137

Solubilization of active receptors for VIP from guinea pig lung.
PAUL, S. and S. I. SAID 147

Receptors for vasoactive intestinal peptide on isolated human sweat glands.
HEINZ-ERIAN, P., S. PAUL and S. I. SAID 151

Secretin receptor activity in rat gastric glands. Binding studies, cAMP generation and pharmacology.
GESPACH, C., D. BATAILLE, N. VAUCLIN, L. MORODER, E. WÜNSCH and G. ROSSELIN 155

Somatocrinin stimulates adenylate cyclase-Ns regulatory subunit in a GH3 cell-line: Comparison with VIP.
REYL-DESMARS, F., F. ZEYTIN and M. J. M. LEWIN 165

Biological Actions/Functions: Central Nervous System

Intercellular communication mediated by VIP in the cerebral cortex.
MAGISTRETTI, P. J. 169

Actions of VIP, hGRF, PHI and secretin: Comparative studies in cerebral cortex and adenohypophysis.
MAGISTRETTI, P. J., P. SCHÖNENBERG, P. KEHRER, J.-L. MARTIN and R. C. GAILLARD 175

VIP binding sites on synaptosomes from rat cerebral cortex: Structure-binding relationship.
STAUN-OLSEN, P., B. OTTESEN, S. GAMMELTOFT and J. FAHRENKRUG 181

Vasoactive intestinal peptide actions on cyclic AMP levels in cultured striatal neurons.
WEISS, S., M. SEBBEN, D. E. KEMP and J. BOCKAERT 187

Circadian cycles in VIP content and VIP stimulation of cyclic AMP accumulation in the rat pineal gland.
KAKU, K., M. TSUCHIYA, Y. TANIZAWA, S. OKUYA, Y. INOUE, T. KANEKO and N. YANAIHARA 193

Pregnancy-induced increase of spinal cord peptide concentrations in rats.
CHERY-CROZE, S., A. BOSSHARD and J. A. CHAYVIALLE 197

Biological Actions/Functions: Peripheral Nervous System

Neurotransmitter-role of VIP in non-adrenergic relaxation of feline myometrium.
HANSEN, B., B. OTTESEN, J.-J. LARSEN and J. FAHRENKRUG 201

A VIP/PHI-containing pathway links urinary bladder and sacral spinal cord.
GIBSON, S. J., J. M. POLAK, P. ANAND, M. A. BLANK, Y. YIANGOU, H. C. SU, G. TERENGHI, T. KATAGIRI, J. F. B. MORRISON, B. M. LUMB, C. INYAMA and S. R. BLOOM 205

Effects of dopaminomimetics on the secretion of VIP-like immunoreactivity in conscious dogs.
GOINY, M. and K. UVNÄS-MOBERG 221

Vasoactive intestinal polypeptide relaxes pulmonary artery by an endothelium-independent mechanism.
SATA, T., H. P. MISRA, E. KUBOTA and S. I. SAID 225

Neurohormonal regulation of secretin secretion in canine duodenal mucosa in vitro.
MURTHY, S. N. S., A. LAVY, D. S. MORGANTINI and W. Y. CHEY 229

Helodermin has a VIP-like effect upon canine blood flow.
NARUSE, S., A. YASUI, S. KISHIDA, M. KADOWAKI, M. HOSHINO, T. OZAKI, P. ROBBERECHT, J. CHRISTOPHE, C. YANAIHARA and N. YANAIHARA 237

Growth hormone releasing hormone stimulates the release of gastrin in rat.
ACCARY, J. P., M. DUBRASQUET, T. LEHY and M. J. M. LEWIN 241

Effect of rGRF on exocrine pancreatic secretion of the rat in vivo.
GOFFETTE, D., J. DE LA TOUR, J. CHARIOT and C. ROZE 245

Ectopic G-29 and G-37 glucagon secretion by hypercalcemic infantile renal tumors.
ROUSSEAU-MERCK, M. F., F. MERCIER, D. BATAILLE and C. NEZELOF 249

Oxyntomodulin and its C-terminal octapeptide inhibit liquid meal-stimulated acid secretion.
JARROUSSE, C., H. NIEL, M.-P. AUDOUSSET-PUECH, J. MARTINEZ and D. BATAILLE 253

Somatostatin enhances the inhibitory effect of oxyntomodulin and its C-terminal octapeptide on acid secretion.
DUBRASQUET, J. M., M.-P. AUDOUSSET-PUECH, J. MARTINEZ and D. BATAILLE 257

Analysis of somatostatin peptides produced by an endocrine pancreatic cell line.
SKALLI, S., A. ESTIVAL, P. FAGOT-REVURAT, L. PRADAYROL, F. CLÉMENTE and A. RIBET 261

Electrophysiologic effects of somatostatin in man.
GHIRLANDA, G., P. SANTARELLI, L. UCCIOLI, S. SANDRIC, F. BELLOCCI, G. BIANCHINI, P. COTRONEO and A. V. GRECO 265

Influence on Growth and Differentiation

VIP regulation of a human pancreatic cancer cell line: Capan-1.
RUELLAN, C., J. L. SCEMAMA, P. CLERC, P. FAGOT-REVURAT, F. CLEMENTE and A. RIBET 267

VIP interaction with intestinal epithelial cells and liver plasma membranes from hepatectomized rats.
PRIETO, J. C., J. L. DIAZ-JUAREZ and E. ARILLA 273

Clinical Studies

Vasoactive intestinal peptide as a bronchodilator in severe asthma.
MORICE, A. H. and P. S. SEVER 279

Clinical studies with human growth hormone releasing factor in normal adults and patients.
SASSOLAS, G., S. BIOT-LAPORTE, R. COHEN, P. CHATELAIN, J. P. BOISSEL, S. FERRY, J. A. CHAYVIALLE, P. DUPIN, P. GARRY, B. CLAUSTRAT, P. GIRARD, F. BORSON, J. TROUILLAS and B. LORAS .. 281

Somatostatin response to a mixed meal in normals and in type I diabetics.
UCCIOLI, L., G. GHIRLANDA, P. COTRONEO, G. BIANCHINI, A. MANTO, A. SOLINI, V. ANNESE and A. V. GRECO 287

Index 293